

Cameron to leave astronaut corps for Hughes

Shuttle Astronaut Ken Cameron will depart NASA and the astronaut corps on Aug. 5 to pursue other career interests.

Cameron, selected as an astronaut in 1984 and a three-time shuttle veteran, will join Hughes Training, Inc., as executive director, Houston Operations.

"Ken's contributions to the astronaut office and to NASA have been valuable," said David Leestma, director of Flight Crew Operations. "He was instrumental in setting up

the support system for NASA astronauts training in Russia. We wish him well in his new career."

Cameron served as the first NASA Director of Operations in Star City, Moscow, where he worked with the Cosmonaut Training Center staff to set up a support system for astronaut operations and training in Star City, and received Russian training in Soyuz and Mir spacecraft systems, and flight training in Russian L-39 aircraft.

Cameron has logged over 561

hours in space. He served as pilot on STS-37 in 1991, commander on STS-56 in 1993 and STS-74 in 1994.

Cameron flew his first mission as pilot on STS-37. This mission—launched on April 5, 1991—featured the deployment of the Gamma Ray Observatory for the purpose of exploring gamma ray sources throughout the universe.

On his second mission, Cameron was commander of STS-56, carrying ATLAS-2. During this nine-day

mission, the crew of *Discovery* conducted atmospheric and solar studies in order to better understand the effect of solar activity on the Earth's climate and environment, and deployed and retrieved the autonomous observatory Spartan.

Cameron commanded STS-74, NASA's second mission to rendezvous and dock with the Russian Mir Space Station, and the first mission to use the shuttle to assemble a module and attach it to a space station.



Ken Cameron

Test subjects needed for life sciences

JSC's Medical Sciences Division is looking for test subjects to study the effects of strength gain during exercise.

"A Comparison of Strength Gains Following Different Combined Concentric and Eccentric Exercise Regimens," will focus on which of three eccentric/concentric exercise programs will lead to the greatest strength gain in muscles.

Subjects will train the lower right extremity quadriceps femoris muscle on the Lido dynamometer three days per week for five weeks. Strength measurements will be obtained before and after the training protocol.

"The purpose of this test is to help determine the best exercise program for astronauts in space," said Patricia Hilliard, coordinator of the study. "We want to give the astronauts an exercise program that can give them the best possible benefit so they can concentrate on their job and not worry about their bodies."

Subjects should be between the ages of 25-50 with no weight training for at least one month before the study with running limited to 12 miles per week. For more information call Patricia Hilliard at x42039.



JSC Photo by Robert Markowitz

WHERE'S THE DRESSING?—From left, Casey Johnson and Tangeneare Ward, summer interns from Tuskegee University, assist scientists and engineers from the Crew and Thermal System Division process lettuce grown at an atmospheric pressure equivalent to about 10,000 feet. The crop, planted in the Variable Pressure Growth Chamber, is being used to study the effects of reduced cabin atmosphere on crop physiology and yield. Future long-duration exploration missions, which may utilize crop plants for bio-regenerative life support, may operate at reduced atmospheric pressure to save mass. A second test will be initiated later this month using wheat. The tests are being performed with the guidance of Kenneth Corey, a visiting scientist from the University of Massachusetts at Amherst, and Daniel Barta of Crew and Thermal Systems Division. Some of the harvested lettuce was given to the four volunteers involved in the Early Human Testing Initiative 30-day test which ends today.

STS-78 crew praises ground, orbit teamwork

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the first few days. We worked real hard the last couple of days and four of these guys are still working. We had science that involved doing everything from collecting your saliva to collecting blood to checking on the health of rats, to looking at fish embryos. These guys made it so easy."

Favier reflected on his first space experience.

"It was for me a very unique experience," Favier said. "The whole crew was so terrific. It was my first flight and I'm sure one of the greatest experiences of my life."

Thirsk talked about the future on the International Space Station and how this flight is a mirror to those future flights.

"What we have shown in the last 17 days is something that you're going to see in the future on the space station as well," said Thirsk, "when you put together dedicated scientists, an enthusiastic crew, ingenious engineers, NASA resolve and international cooperation, you got a formula for success."

Brady praised his team mates and the NASA family on what an honor it was to be part of the program.

"The people I am looking at right now are my heroes," Brady said. "NASA has meant something to myself and my family and my community I came from for years and years. It was an honor to

serve with this crew—tremendous people, tremendous spirit, tremendous camaraderie, tremendous heart and I would just like to tell you the honor was mine."

Linnehan said he wished all of his co-workers could have shared in the experience.

"It was an incredible experience and one that I wish all of you could share with me," said Linnehan "I couldn't have done any of it without you or your support. We got all the science accomplished, perhaps a little more than they thought we would."

Kregel praised his payload commander for keeping the science on track.

"We came back with all the science that we needed," Kregel said, "and I think all the scientists will agree that we came back with not 100 percent mission but over 100 percent mission and a lot of it has to do with Susan."

Helms commended the payload crew members for their outstanding efforts during the flight.

"You can try to put a flight together to get something done, but it won't work unless you got a crew that is willing to knock themselves out to get the science and throw themselves into the effort wholeheartedly," Helms said. "There is no question these guys did that. The results are going to be incredible."

Career options deadline extended

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possible before they make important retirement decisions, we are extending the deadline to Oct. 3," said Harvey Hartman, director of JSC's Human Resources Office. "We hope this extension gives interested employees the additional time and information they need as they make retirement choices."

The Partners in Education and Partners in Technology programs were due to expire June 30 and Aug. 30, respectively, and now have been extended to the Oct. 3 deadline. All four programs will expire on the October date.

Employees with questions on any aspect of the Careers Plus+ Program can contact their Human Resources representatives. Questions about retirement calculations should be addressed to Employee Services at x32681.

Space News Roundup

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Kids' Space Place offers entertainment variety

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with their kids and with our kids," said Debi Matthews, Space Center Houston's group sales coordinator. "We want them to have a special night where they can introduce their children to space and what they do for a living."

The Lunar Jumper exhibit is one of the many attractions being offered in this new exhibit and is the first of its kind anywhere. Once strapped into the lunar jumper harness, guests will experience what it would be like to move around on the moon that is one-sixth-of-the-Earth's gravity, simulated by a system of cables and compressed air. Created especially for Kids' Space Place, it is the closest most people will ever come to walking on the moon.

Another highlight for the children is a replica of the actual vehicle astronauts used to roam the surface of the moon. A monitor in front

of the vehicle playing a moving landscape, coupled with a vibrating seat to simulate the rumbling over a lunar landscape and a moving power throttle, will give children the feel of what it is like to drive on the moon.

Other exhibits require the children, each with a mission book, to work with other children throughout the area to complete a set of activities in Mission Kidtrol, the Space Shuttle, the Apollo Command Module and the Space Station. These interactive exhibits not only give guests an opportunity to see the type of work done in each of these areas of the space program, but also provide an opportunity to learn the importance of flight and ground crews working as a team.

The Rocket Launcher is another exhibit that provides an ideal way for young space enthusiasts to get a hands-on idea of how a rocket

launch actually works. Children will control the launch from start to finish, launching a rocket, amid warning lights and sounds, to the five story ceiling of the center.

Children also will have the chance to become spacecraft designers, utilizing a computer program that will instruct them on how to actually build a multi-stage rocket.

Numerous other attractions will allow children to experience the effects of wind resistance, the frictionless environment of space and the effects of the different gravitational pulls on planets in the solar system.

On NASA night, JSC employees are admitted free when they show their badges, and may bring up to four guests at a cost of \$5 per person. Badged contractors and up to four guests will be admitted at a cost of \$5 each. Children under three will be admitted free.